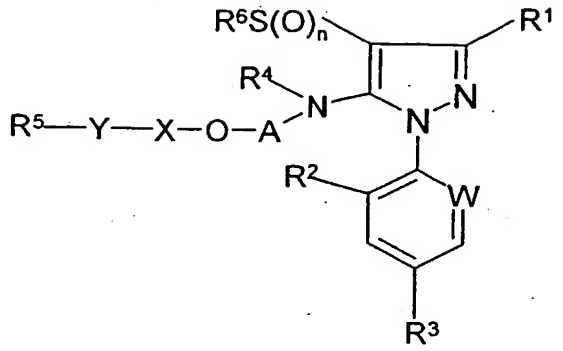
CLAIMS

1. A compound of formula (I):



(I)

wherein:

R^1 is CN, $CSNH_2$ or $C(=N\text{-}Z)\text{-}S(O)_r\text{-}Q$;

Z is H, $(C_1\text{-}C_6)$-alkyl, $(C_1\text{-}C_6)$-haloalkyl, $(C_3\text{-}C_6)$-alkenyl, $(C_3\text{-}C_6)$-alkynyl, $-(CH_2)_qR^7$, COR^8, $CO_2\text{-}(C_1\text{-}C_6)$-alkyl or $S(O)_pR^8$;

Q is $(C_1\text{-}C_6)$-alkyl or CH_2R^7;

W is C-halogen, $C\text{-}CH_3$ or N;

R^2 is hydrogen, halogen or CH_3;

R^3 is $(C_1\text{-}C_3)$-haloalkyl, $(C_1\text{-}C_3)$-haloalkoxy or SF_5;

R^4 is hydrogen, $(C_2\text{-}C_6)$-alkenyl, $(C_2\text{-}C_6)$-haloalkenyl, $(C_2\text{-}C_6)$-alkynyl, $(C_2\text{-}C_6)$-haloalkynyl, $(C_3\text{-}C_7)$-cycloalkyl, $(C_3\text{-}C_7)$-cycloalkyl-$(C_1\text{-}C_6)$-alkyl, $CO_2\text{-}(C_1\text{-}C_6)$-alkyl, $CO_2\text{-}(C_3\text{-}C_6)$-alkenyl, $CO_2\text{-}(C_3\text{-}C_6)$-alkynyl, $CO_2\text{-}(CH_2)_mR^7$ or SO_2R^8; or $(C_1\text{-}C_6)$-alkyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, $(C_1\text{-}C_6)$-alkoxy, $(C_1\text{-}C_6)$-haloalkoxy, $(C_3\text{-}C_6)$-alkenyloxy, $(C_3\text{-}C_6)$-haloalkenyloxy, $(C_3\text{-}C_6)$-alkynyloxy, $(C_3\text{-}C_6)$-haloalkynyloxy, $(C_3\text{-}C_7)$-cycloalkyl, $S(O)_pR^8$, CN, NO_2, OH, COR^9, NR^9R^{10}, $S(O)_pR^7$, OR^7 and CO_2R^9;

A is $(C_1\text{-}C_6)$-alkylene or $(C_1\text{-}C_6)$-haloalkylene;

X is C(=O), C(=S) or SO_2;

Y is O, NR^{11} or a covalent bond;

R^5 is $(C_3\text{-}C_6)$-alkenyl, $(C_3\text{-}C_6)$-haloalkenyl, $(C_3\text{-}C_6)$-alkynyl, $(C_3\text{-}C_6)$-haloalkynyl, $(C_3\text{-}C_7)$-cycloalkyl, $(C_3\text{-}C_7)$-cycloalkyl-$(C_1\text{-}C_6)$-alkyl, $-(CH_2)_qR^7$ or $-(CH_2)_qR^{12}$; or is $(C_1\text{-}$

C_6)-alkyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_6)-alkoxy, (C_1-C_6)-haloalkoxy, (C_3-C_6)-alkenyloxy, (C_3-C_6)-haloalkenyloxy, (C_3-C_6)-alkynyloxy, (C_3-C_6)-haloalkynyloxy, (C_3-C_7)-cycloalkyl, $S(O)_pR^8$, CN, NO_2, OH, COR^9, NR^9R^{10}, $S(O)_pR^7$, OR^7 and CO_2R^9;

R^6 is (C_1-C_6)-alkyl, (C_1-C_6)-haloalkyl, (C_2-C_6)-alkenyl, (C_2-C_6)-haloalkenyl, (C_2-C_6)-alkynyl or (C_2-C_6)-haloalkynyl;

R^7 is phenyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_6)-alkyl, (C_1-C_6)-haloalkyl, (C_1-C_6)-alkoxy, (C_1-C_6)-haloalkoxy, CN, NO_2, $S(O)_pR^8$, COR^{10}, COR^{13}, $CONR^9R^{10}$, $SO_2NR^9R^{10}$, NR^9R^{10} and OH;

R^8 is (C_1-C_6)-alkyl or (C_1-C_6)-haloalkyl;

R^9 and R^{10} are each independently H, (C_1-C_6)-alkyl, (C_1-C_6)-haloalkyl, (C_3-C_6)-alkenyl, (C_3-C_6)-haloalkenyl, (C_3-C_6)-alkynyl, (C_3-C_6)-cycloalkyl or -(C_1-C_6)-alkyl-(C_3-C_6)-cycloalkyl; or

R^9 and R^{10} together with the attached N atom form a five- or six-membered saturated ring which optionally contains an additional hetero atom in the ring which is selected from O, S and N, the ring being unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_6)-alkyl and (C_1-C_6)-haloalkyl;

R^{11} is H, (C_1-C_6)-alkyl, (C_1-C_6)-haloalkyl, (C_3-C_6)-alkenyl or (C_3-C_6)-alkynyl;

R^{12} is heterocyclyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, NO_2, CN, CO_2(C_1-C_6)-alkyl, $S(O)_pR^8$, OH and oxo;

R^{13} is phenyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_6)-alkyl, (C_1-C_6)-haloalkyl, (C_1-C_6)-alkoxy, (C_1-C_6)-haloalkoxy, CN, NO_2, $S(O)_pR^8$ and NR^9R^{10};

n, p and r are each independently zero, one or two;

m and q are each independently zero or one; and

each heterocyclyl in the above-mentioned radicals is independently a heterocyclic radical having 3 to 7 ring atoms and 1, 2 or 3 hetero atoms in the ring selected from the group consisting of N, O and S;

or a pesticidally acceptable salt thereof.

2. A compound or a salt thereof as claimed in claim 1 wherein R^1 is CN or $CSNH_2$.

3. A compound or a salt thereof as claimed in claim 1 or 2 wherein R^6 is CF_3.

4. A compound or a salt thereof as claimed in claim 1, 2 or 3 wherein R^1 is CN, $CSNH_2$ or C(=N-Z)-S-Q;
Z is H, (C_1-C_3)-alkyl, $-(CH_2)_qR^7$, COR^8, CO_2-(C_1-C_3)-alkyl or $S(O)_pR^8$;
Q is (C_1-C_3)-alkyl;
W is C-Cl;
R^2 is Cl;
R^3 is CF_3;
R^4 is hydrogen, (C_2-C_4)-alkenyl, (C_2-C_4)-alkynyl, (C_3-C_7)-cycloalkyl, CO_2-(C_1-C_4)-alkyl, CO_2-(C_3-C_4)-alkenyl, CO_2-(C_3-C_4)-alkynyl, $CO_2-(CH_2)_mR^7$ or SO_2R^8; or (C_1-C_3)-alkyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_3)-alkoxy, $S(O)_pR^8$ and CO_2-(C_1-C_3)-alkyl);
A is $-CH_2CH_2-$ or $-CH_2CH_2CH_2-$;
X is C(=O) or SO_2;
Y is O, NH or a covalent bond;
R^5 is (C_3-C_4)-alkenyl, (C_3-C_4)-alkynyl, $-(CH_2)_qR^7$, (C_1-C_3)-alkyl or (C_1-C_3)-haloalkyl;
R^6 is CF_3;
each R^7 is independently phenyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_3)-alkyl, (C_1-C_3)-haloalkyl, (C_1-C_3)-alkoxy, (C_1-C_3)-haloalkoxy, CN, NO_2 and $S(O)_pR^8$; and
each R^8 is independently (C_1-C_3)-alkyl or (C_1-C_3)-haloalkyl.

5. A compound or a salt thereof as claimed in any one of claims 1 to 4 wherein R^1 is CN or $CSNH_2$;
W is C-Cl;
R^2 is Cl;
R^3 is CF_3;

R^4 is $(C_1$-$C_3)$-alkyl;

A is $-CH_2CH_2-$ or $-CH_2CH_2CH_2-$;

X is C(=O);

Y is O, NH or a covalent bond;

R^5 is $(C_3$-$C_4)$-alkenyl, $(C_3$-$C_4)$-alkynyl, $-(CH_2)_qR^7$, $(C_1$-$C_3)$-alkyl or $(C_1$-$C_3)$-haloalkyl;

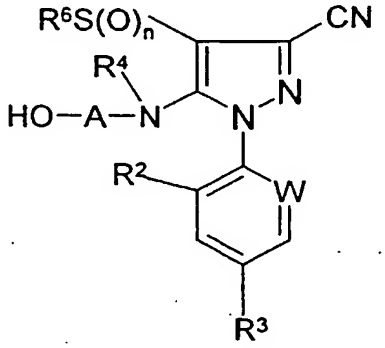
R^6 is CF_3;

R^7 is phenyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, $(C_1$-$C_3)$-alkyl, $(C_1$-$C_3)$-haloalkyl, $(C_1$-$C_3)$-alkoxy, $(C_1$-$C_3)$-haloalkoxy, CN, NO_2 and $S(O)_pR^8$; and

R^8 is $(C_1$-$C_3)$-alkyl or $(C_1$-$C_3)$-haloalkyl.

6. A process for the preparation of a compound of formula (I) or a salt thereof as defined in any one of claims 1 to 5, which process comprises:

a) where R^2, R^3, R^4, R^5, R^6, W, A and n are as defined in claim 1, R^1 is CN, and Y and X are as defined in claim 1 with the exclusion of compounds in which -Y-X- is -NH-CO- or -NH-CS-, acylating or sulfonylating a compound of formula (II):



(II)

wherein R^2, R^3, R^4, R^6, W, A and n are as defined in formula (I), with a compound of formula (III):

$$R^5—Y—X—L \qquad (III)$$

wherein Y and X are as defined in formula (I) with the exclusion of compounds in which -Y-X- is -NH-CO- or -NH-CS-, and L is a leaving group; or

b) where R^1 is CN, and R^2, R^3, R^4, R^5, R^6, W, A and n are as defined in claim 1, reacting a compound of formula (II) wherein R^1, R^2, R^3, R^6, W, A and n are as defined in claim 1 and -Y-X- is -NH-CO- or -NH-CS-, with an isocyanate or isothiocyanate compound of formula (IV) or (V):

R^5-N=C=O (IV) R^5-N=C=S (V)

wherein R^5 is as defined in formula(I); or

c) where R^1 is CN, n is 1 or 2, and R^2, R^3, R^4, R^5, R^6, W, A, X and Y are as defined in claim 1, oxidising a corresponding compound in which n is 0 or 1; or

d) where R^1 is $CSNH_2$, and R^2, R^3, R^4, R^5, R^6, W, A, X, Y and n are as defined in claim 1, reacting the corresponding compound of formula (I) wherein R^1 is CN, with an alkali or alkaline earth metal hydrosulfide, or with the reagent Ph_2PS_2; or

(e) where R^1 is $CSNH_2$, and R^2, R^3, R^4, R^5, R^6, W, A, X, Y and n are as defined in claim 1, reacting the corresponding compound of formula (I) wherein R^1 is CN, with a bis(trialkylsilyl)sulfide, in the presence of a base; or

(f) where R^1 is C(=N-H)-S-Q, and Q, R^2, R^3, R^4, R^5, R^6, W, A, X, Y and n are as defined in claim 1, reacting the corresponding compound of formula (I) wherein R^1 is $CSNH_2$ with an alkylating agent of formula (VI) or (VII):

$Q\text{-}L^1$ (VI) $Q_3O^+BF_4^-$ (VII)

wherein Q is as defined in formula (I) and L^1 is a leaving group; or

(g) where R^1 is C(=N-Z)-S-Q, Z is as defined in claim 1 with the exclusion of H, and the other values are as defined in formula (I), alkylating, acylating or sulfonylating the corresponding compound of formula (I) wherein Z is H, with a compound of formula (VIII):

$Z\text{-}L^2$ (VIII)

wherein Z is as defined in formula (I) with the exclusion of H, and L^2 is a leaving group; and

(h) if desired, converting a resulting compound of formula (I) into a pesticidally acceptable salt thereof.

7. A pesticidal composition comprising a compound of formula (I) or a pesticidally acceptable salt thereof as defined in any one of claims 1 to 5, in association with a pesticidally acceptable diluent or carrier and/or surface active agent.

8. The use of a compound of formula (I) or a salt thereof according to any one of claims 1 to 5 or of a composition according to claim 7, for the preparation of a veterinary medicament.

9. The use of a compound of formula (I) or a salt thereof according to any one of claims 1 to 5 or of a composition according to claim 7, for the control of pests.

10. A method for controlling pests at a locus which comprises applying thereto an effective amount of a compound of formula (I) or a salt thereof as claimed in any one of claims 1 to 5 or of a composition according to claim 7.